UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,513	07/23/2003	Hidetoshi Kayama	240598US90	7423

22850 7590 09/19/2008

OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
HAILE, FEBEN

ART UNIT	PAPER NUMBER
2616	

NOTIFICATION DATE	DELIVERY MODE
09/19/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No.	Applicant(s)	
	10/624,513	KAYAMA ET AL.	
	Examiner	Art Unit	
	FEBEN HAILE	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 June 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,9 and 10* is/are rejected.

7)☒ Claim(s) *6-8 and 11-13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In view of applicant's amendment filed June 19, 2008, the status of the application is still pending with respect to claims 1-13.

2. The amendment filed is insufficient to overcome the rejection of claims 1-5 and 9-10 based upon Applicants Admitted Prior Art (page 2 lines 15-22), Tsunehara et al. (IS 6,907,260), Komatsu (US 2001/0023188), Kuo et al. (US 6,542,718), and newly discovered reference Okumura et al. (US 7,277,721) as set forth in this new Office action because: the Applicants claimed invention fails to clarify a distinction over the cited references, thus the subject matter is not patentable.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-4 and 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art (page 2 lines 15-22), hereinafter referred to as AAPA, in view of Tsunehara et al. (IS 6,907,260), hereinafter referred to as Tsunehara, in view of in view of Raaf (US 7,065,183), hereinafter referred to as Raaf.

Regarding claim 1, AAPA discloses the first control method controlling the transmission power so as to keep the received power of the packet signals constant **(page 2 lines 15-18; a first control method for controlling the transmission power of signals in each transmitter so as to keep the received power of the signals in the receiver constant)**, the second control method controlling the transmission power so as to keep a ratio between the received power of the packet signals and the interference power in the radio channels constant **(page 2 lines 19-22; a second control method for controlling the transmission power, so as to keep an SIR of the signals transmitted via each radio channel constant)**.

AAPA fails to explicitly suggest measuring the traffic volume of the packet signals in the base station; and switching between a first control method and a second control method based on the measured traffic volume in the base station.

Tsunehara teaches measuring the traffic volume of the packet signals in the base station **(figure 29 and column 1 lines 51-54 & column 2 lines 9-19; a base station for measuring a signal to interference power ratio of a signal sent from a mobile station in the upstream direction to transmit a transmit power controlling signal including upstream channel SIR measuring portion measuring SIR of the received signal input and an upstream channel transmit power controlling signal generating portion comparing the SIR of the received signal with a target SIR to generate transmit power controlling signals)**; and switching between a first control method and a second control method based on the measured traffic volume in the base station **(figure 29 and column 2 lines 34-42; a comparator to generate a signal to of**

either a 0 or 1 depending on whether the SIR of the received signal is larger or smaller then the target SIR and a selector for choosing either the 0 or 1 to instruct the mobile station on how to control power).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of controlling transmit power taught by Tsunehara into the transmitter configured to control transmission power disclosed by AAPA. The motivation for such a modification is to improve communication quality, thereby increasing communication capacity.

AAPA, Tsunehara, and/or their combination fail to explicitly suggest that the first and second control methods are for determining the transmission power.

Raaf teaches that the first and second control methods are for determining the transmission power **(column 5 lines 31-56; combining two power control techniques such that switching between these principles is soft or gradual)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of controlling the transmitting power in a mobile radio system taught by Raaf into the transmitter configured to control transmission power disclosed by AAPA as modified by the method of controlling transmit power taught by Tsunehara. The motivation for such a modification is an improved method of controlling the transmitting power in a mobile station such that to provide a radio system which eliminates the influence of delays in a power control system as completely as possible.

Regarding claim 2, AAPA discloses the first control method controlling the transmission power so as to keep the received power of the packet signals constant **(page 2 lines 15-18; a first control method for controlling the transmission power of signals in each transmitter so as to keep the received power of the signals in the receiver constant)**, the second control method controlling the transmission power so as to keep a difference between the received power of the packet signals and the interference power in the radio channels constant **(page 2 lines 19-22; a second control method for controlling the transmission power, so as to keep an SIR of the signals transmitted via each radio channel constant)**.

AAPA fails to explicitly suggest measuring the traffic volume of the packet signals in the base station; and switching between a first control method and a second control method based on the measured traffic volume in the base station.

Tsunehara teaches measuring the traffic volume of the packet signals in the base station **(figure 29 and column 1 lines 51-54 & column 2 lines 9-19; an upstream channel SIR measuring portion measuring SIR of the received signal input and an upstream channel transmit power controlling signal generating portion comparing the SIR of the received signal with a target SIR to generate transmit power controlling signals)**; and switching between a first control method and a second control method based on the measured traffic volume in the base station **(figure 29 and column 2 lines 34-42; a comparator to generate a signal to of either a 0 or 1 depending on whether the SIR of the received signal is larger or smaller then**

the target SIR and a selector for choosing either the 0 or 1 to instruct the mobile station on how to control power).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of controlling transmit power taught by -Tsunehara into the transmitter configured to control transmission power disclosed by AAPA. The motivation for such a modification is to improve communication quality, thereby increasing communication capacity.

AAPA, Tsunehara, and/or their combination fail to explicitly suggest that the first and second control methods are for determining the transmission power.

Raaf teaches that the first and second control methods are for determining the transmission power **(column 5 lines 31-56; combining two power control techniques such that switching between these principles is soft or gradual)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of controlling the transmitting power in a mobile radio system taught by Raaf into the transmitter configured to control transmission power disclosed by AAPA as modified by the method of controlling transmit power taught by Tsunehara. The motivation for such a modification is an improved method of controlling the transmitting power in a mobile station such that to provide a radio system which eliminates the influence of delays in a power control system as completely as possible.

Regarding claim 3, AAPA discloses the first control method controlling the transmission power so as to keep the received power of the packet signals constant

(page 2 lines 15-18; a first control method for controlling the transmission power of signals in each transmitter so as to keep the received power of the signals in the receiver constant), the second control method controlling the transmission power so as to keep a ratio between the received power of the packet signals and the interference power in the radio channels constant **(page 2 lines 19-22; a second control method for controlling the transmission power, so as to keep an SIR of the signals transmitted via each radio channel constant)**.

AAPA fails to explicitly suggest measuring the traffic volume of the packet signals in the base station; and switching between a first control method and a second control method based on the measured traffic volume in the base station.

Tsunehara teaches measuring the traffic volume of the packet signals in the base station **(figure 29 and column 1 lines 51-54 & column 2 lines 9-19; a base station for measuring a signal to interference power ratio of a signal sent from a mobile station in the upstream direction to transmit a transmit power controlling signal including upstream channel SIR measuring portion measuring SIR of the received signal input and an upstream channel transmit power controlling signal generating portion comparing the SIR of the received signal with a target SIR to generate transmit power controlling signals)**; and switching between a first control method and a second control method based on the measured traffic volume in the base station **(figure 29 and column 2 lines 34-42; a comparator to generate a signal to of either a 0 or 1 depending on whether the SIR of the received signal is larger or**

smaller then the target SIR and a selector for choosing either the 0 or 1 to instruct the mobile station on how to control power).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of controlling transmit power taught by Tsunehara into the transmitter configured to control transmission power disclosed by AAPA. The motivation for such a modification is to improve communication quality, thereby increasing communication capacity.

AAPA, Tsunehara, and/or their combination fail to explicitly suggest that the first and second control methods are for determining the transmission power.

Raaf teaches that the first and second control methods are for determining the transmission power **(column 5 lines 31-56; combining two power control techniques such that switching between these principles is soft or gradual)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of controlling the transmitting power in a mobile radio system taught by Raaf into the transmitter configured to control transmission power disclosed by AAPA as modified by the method of controlling transmit power taught by Tsunehara. The motivation for such a modification is an improved method of controlling the transmitting power in a mobile station such that to provide a radio system which eliminates the influence of delays in a power control system as completely as possible.

Regarding claim 4, AAPA discloses the first control method controlling the transmission power so as to keep the received power of the packet signals constant

(page 2 lines 15-18; a first control method for controlling the transmission power of signals in each transmitter so as to keep the received power of the signals in the receiver constant), the second control method controlling the transmission power so as to keep a ratio between the received power of the packet signals and the interference power in the radio channels constant **(page 2 lines 19-22; a second control method for controlling the transmission power, so as to keep an SIR of the signals transmitted via each radio channel constant)**.

AAPA fails to explicitly suggest measuring the traffic volume of the packet signals in the base station; and switching between a first control method and a second control method based on the measured traffic volume in the base station.

Tsunehara teaches measuring the traffic volume of the packet signals in the base station **(figure 29 and column 1 lines 51-54 & column 2 lines 9-19; a base station for measuring a signal to interference power ratio of a signal sent from a mobile station in the upstream direction to transmit a transmit power controlling signal including upstream channel SIR measuring portion measuring SIR of the received signal input and an upstream channel transmit power controlling signal generating portion comparing the SIR of the received signal with a target SIR to generate transmit power controlling signals)**; and switching between a first control method and a second control method based on the measured traffic volume in the base station **(figure 29 and column 2 lines 34-42; including a comparator to generate a signal to of either a 0 or 1 depending on whether the SIR of the received signal is**

larger or smaller then the target SIR and a selector for choosing either the 0 or 1 to instruct the mobile station on how to control power).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of controlling transmit power taught by Tsunehara into the transmitter configured to control transmission power disclosed by AAPA. The motivation for such a modification is to improve communication quality, thereby increasing communication capacity.

AAPA, Tsunehara, and/or their combination fail to explicitly suggest that the first and second control methods are for determining the transmission power.

Raaf teaches that the first and second control methods are for determining the transmission power **(column 5 lines 31-56; combining two power control techniques such that switching between these principles is soft or gradual)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of controlling the transmitting power in a mobile radio system taught by Raaf into the transmitter configured to control transmission power disclosed by AAPA as modified by the method of controlling transmit power taught by Tsunehara. The motivation for such a modification is an improved method of controlling the transmitting power in a mobile station such that to provide a radio system which eliminates the influence of delays in a power control system as completely as possible.

Regarding claim 9, AAPA discloses the first control method controlling the transmission power so as to keep the received power of the packet signals constant

(page 2 lines 15-18; a first control method for controlling the transmission power of signals in each transmitter so as to keep the received power of the signals in the receiver constant), the second control method controlling the transmission power so as to keep a difference between the received power of the packet signals and the interference power in the radio channels constant **(page 2 lines 19-22; a second control method for controlling the transmission power, so as to keep an SIR of the signals transmitted via each radio channel constant)**.

AAPA fails to explicitly suggest measuring the traffic volume of the packet signals in the base station; and switching between a first control method and a second control method based on the measured traffic volume in the base station.

Tsunehara teaches measuring the traffic volume of the packet signals in the base station **(figure 29 and column 1 lines 51-54 & column 2 lines 9-19; an upstream channel SIR measuring portion measuring SIR of the received signal input and an upstream channel transmit power controlling signal generating portion comparing the SIR of the received signal with a target SIR to generate transmit power controlling signals)**; and switching between a first control method and a second control method based on the measured traffic volume in the base station **(figure 29 and column 2 lines 34-42; a comparator to generate a signal to of either a 0 or 1 depending on whether the SIR of the received signal is larger or smaller then the target SIR and a selector for choosing either the 0 or 1 to instruct the mobile station on how to control power)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of controlling transmit power taught by -Tsunehara into the transmitter configured to control transmission power disclosed by AAPA. The motivation for such a modification is to improve communication quality, thereby increasing communication capacity.

AAPA, Tsunehara, and/or their combination fail to explicitly suggest that the first and second control methods are for determining the transmission power.

Raaf teaches that the first and second control methods are for determining the transmission power **(column 5 lines 31-56; combining two power control techniques such that switching between these principles is soft or gradual)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of controlling the transmitting power in a mobile radio system taught by Raaf into the transmitter configured to control transmission power disclosed by AAPA as modified by the method of controlling transmit power taught by Tsunehara. The motivation for such a modification is an improved method of controlling the transmitting power in a mobile station such that to provide a radio system which eliminates the influence of delays in a power control system as completely as possible.

4. Claim 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art (page 2 lines 15-22), hereinafter referred to as AAPA, in view of Tsunehara et al. (US 6,907,260), hereinafter referred to as Tsunehara, in view of Raaf

(US 7,065,183), hereinafter referred to as Raaf, in view of Komatsu (US 2001/0023188), hereinafter referred to as Komatsu.

Regarding claim 5, AAPA as modified by Tsunehara and Okumura discloses the limitation of the base claim.

Tsunehara further discloses the measurer measures an average interference power in the upstream radio channels as the traffic volume of the packet signals **(figure 29 unit 221 and column 2 lines 9-14; upstream channel SIR measuring portion measuring SIR of the received signal input)**, and the switcher switches between the first control method and the second control method, based on the average interference power and a predetermined threshold **(figure 29 column 2 lines 15-19; an upstream channel transmit power controlling signal generating portion comparing the SIR of the received signal with a target SIR to generate transmit power controlling signals; figure 31 and column 2 lines 34-38; a comparator to generate a signal to of either a 0 or 1 depending on whether the SIR of the received signal is larger or smaller then the target SIR; figure 31 and column 2 lines 38-42; a selector for choosing either the 0 or 1 to instruct the mobile station on how to control power)**.

AAPA, Tsunehara, Raaf, and/or their combination fail to explicitly suggest measuring interference power per time unit.

Komatsu teaches measuring interference power per time unit **(page 1 paragraph 0007; a power control method where a base station measures the reception level in a unit of a time slot and compares the reception level with a reference value for issuing an instruction to a mobile station to vary its transmission level)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate power control method taught by Komatsu into the transmitter configured to control transmission power disclosed by Admitted Prior Art as modified by the method of controlling transmit power suggested by Tsunehara and the method of controlling the transmitting power in a mobile radio system taught by Raaf. The motivation for such a modification is to improve the communication quality in the reverse-link to a base station.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsunehara et al. (IS 6,907,260), hereinafter referred to as Tsunehara, in view of Kuo et al. (US 6,542,718), hereinafter referred to as Kuo.

Regarding claim 10, Tsunehara discloses a notification signal received power measurer configured to measure the received power of a notification signal transmitted from the base station **(figure 3 unit 40 and column 3 lines 15-25; a transmit power controlling signal determining portion determines whether the received transmit power controlling signal is a 0 or 1)**; an extractor configured to extract the traffic volume of packet signals transmitted via upstream radio channels and a control method of the transmission power of the packet signals selected in the base station, from the notification signal (**figure 32 unit 41 and column 3 lines 26-29; a selector outputs a variation amount of the transmit power in accordance with a controlling signal input from the transmit power controlling signal determining portion)**; and to transmit the packet signals based on the received power of the notification signal, the

traffic volume of the packet signals and the control method of the transmission power of the packet signals **(figure 32 unit 19 and column 3 lines 30-37; a transmit power calculation portion determines the changed transmit power, using the variation amount of the transmit power input from the selector and the current transmit power input from a transmit power maintaining circuit)**.

Tsunehara fails to explicitly suggest a transmission judger configured to judge whether or not to transmit the packet signals based on information.

Kuo teaches a transmission judger configured to judge whether or not to transmit the packet signals based on information **(column 3 lines 18-22; a method which determines whether or not a burst transmission from a wireless unit to a base station should be terminated by evaluating at least one criterion related to the operation of a wireless system)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the methodology for signal transmission taught by Kuo into the method of controlling transmit power suggested by Tsunehara. The motivation for such a modification is to insure control of interference.

Allowable Subject Matter

6. Claims 6-8 and 11-13 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments with respect to claims 1-5 and 9 have been considered but are moot in view of the new ground(s) of rejection.

8. Applicant's arguments with respect to claim 10 have been fully considered but they are not persuasive.

The Applicant respectfully traverses that Kuo fails to teach or suggest a *mobile station* configured to "judge *whether or not to transmit the packet signals, based on the received power of the notification signals, the traffic volume of the packet signals and the control method of the transmission power of the packet signals…*" The Examiner respectfully disagrees with the Applicant. Kuo teaches a method which determines whether or not a burst transmission from a wireless unit to a base station should be terminated by evaluating at least one criterion related to the operation of a wireless system. Although Kuo teaches that this method being performed at a base station, it is the transceiver within the base station that is doing the actual judgment procedure. This transceiver could have been implemented within a mobile station because it has been held that making a device portable or movable without producing any new and unexpected result involves only routine skill in the art. Therefore as the claim is reasonably interpreted in its broadest since, the Examiner believes that Kuo indeed does render the Applicant's invention obvious

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

a) Ichikawa (US 6438387), Radio Communication Device and Transmission Power Control method for Radio Communication Device

b) Okumura et al. (US 7,277,721), Transmission Power Control Apparatus and Method in a Mobile Communication System, Mobile Station, and Communication Apparatus

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FEBEN HAILE whose telephone number is (571)272-3072. The examiner can normally be reached on 10:00 am-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aung Moe can be reached on (571)272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aung S. Moe/
Supervisory Patent Examiner, Art Unit 2616

FEBEN HAILE
Examiner
Art Unit 2616